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## The Influence Of Musical Expression On Creativity And Interpersonal Relationships In Children

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### Abstract

Developing creativity and interpersonal relationships at school is an essential element in teaching activities. This study was conducted to determine whether participation in a group musical activity would enhance interpersonal relationships and creativity in 9-year-old students to a significantly greater degree than no participation in musical activities. Performances of the Williams Creative Thinking Test (WCTT) and of the Test of Interpersonal Relationships (TRI) in two class groups, musical (n= 36) and non-musical (n=32), were compared by measuring changes in pre-test and post-test data. The results indicated that the experimental group, compared with control group, made significant gain at the post-test in WCTT scores only for the factor 'imagination', and in interpersonal relationships, particularly with peers.

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### 1. Introduction

An increasing amount of research suggests that active engagement with music positively affects social, intellectual and personal development. The impact of learning musical skills, particularly if in a group context,

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intellectual and personal development. The impact of learning musical skills, particularly if in a group context, extends far beyond musical education aspects, to general attainment, creativity, emotional sensitivity, social skills, team work. Since the positive effect of musical activity has often been shown in a music classroom setting (Hallam, 2010), musical creativity appears to be an important trigger in implementing therapeutic and educational programmes aimed at enhancing the quality of interpersonal relationships.

### *1.1. Creativity*

The term “creativity” is used in different contexts (e.g. technical, scientific, literal) and over the past 20 years a series of educational initiatives (National Advisory Committee on Creative and Cultural Education [NACCCE] 1999; Robinson 1982) has explored a broad meaning of the term. Creativity is a very multifaceted aspect of human behaviour, and for this reason it is not easy to provide a universally acceptable definition. According to Rodhes (1961), Treffinger, Isaksen, & Firestein (1982) distinguished four general approaches to the issue of defining creativity. “Some definitions view creativity as a fundamental description of a person. Within this definition, there is an emphasis on personality characteristics distinguishing highly creative people from their less creative peers. Other approaches he identified are more concerned with creativity as a process in which the stages of creative activity are described, or in which the abilities which influence creativity are assessed and analysed. By contrast, some writers choose to emphasize creativity as a product, defining and distinguishing among more or less creative people only on the basis of the resulting products or accomplishments. Finally, some writers stress environmental press, emphasizing the role of social and cultural influences in the development and expression of creativity” (p. 5). Openness to experience (also in interpersonal settings) is related with different forms of creativity (Batey & Furnham, 2006); moreover, creativity is positively linked with positive affects (Davis, 2009). Whichever definition of creativity is accepted, good teachers must cultivate the seeds of creativity so that they may blossom into divergent thoughts. Music creativity, in particular, showed in infancy a significant grade-level difference: Kiehn (2003) demonstrated a growth stage from grade 2 to 4, and a significant correlation with figural creativity. Moreover, creativity implied in musical participation has an intrinsically social nature, and this may have relevant education implications (McDonald & Miell, 2000).

### *1.2. Interpersonal relationships*

An interpersonal relationship is an association between two or more people that may be transient or permanent. These relationships usually engage some interdependence. People in a relationship have a tendency to persuade each other, share their feelings and thoughts and do activities together. Interpersonal relationships and communication are closely related; the way we communicate might vary according to different contexts. Reactions to situations depend on many variables such as age, value, gender, education, past experience, bias and so on. When we make judgments about others, we have a lot of information to process. To make sense of it all we usually screen this information on the basis of our own beliefs and values (Zahran, 2012). Interpersonal relationships are based also on non-verbal communication (Richmond et al., 2011); openness to experience (also in interpersonal settings) is related with different forms of creativity (Batey and Furnham, 2006).

## **2. Purpose of study**

The purpose of our study is to demonstrate the effectiveness of a training intervention which, making use of non-verbal communication in group setting of musical education is aimed at improving both creativity and interpersonal relationships in elementary school children at the age of 9, indicated by Kiehn (2003) as critical for growth of music creativity.

### 3. Method

#### 3.1. Participants

The participants were 68 students (M=33; F=35) aged 9 years old recruited from two classes of an elementary school in Catania (Italy). One class constituted the control group (n=32) and the other the experimental group (n=36); the latter took part in the Free Musical Expression Laboratory, while the control group participated in the regular group activities. The two groups did not significantly differ in any aspects rather than participation in the specific musical activity.

#### 3.2. Free Musical Expression Laboratory

The Free Musical Expression Laboratory, conducted by one of the authors (L.U.), lasted six months and was addressed to one class of 9-year-old elementary school students in Catania. The free musical expression helped children communicate emotions and sensations by means of musical instruments, everyday objects as well as their bodies. The purposes of this laboratory were to develop a free approach to creative and playful music in order to increase the ability of using the language of sounds in its many forms, as well as for the students to relate to one another. The educational intervention was divided in four phases of 6 games each, with each game lasting 60 minutes. The first phase was called “Active Listening”: children were invited to actively listen to all the sounds and noises coming from the environment (i.e., the classroom). The second phase was called “Self-Listen and Listen”: children were asked to listen to the sounds produced by everyday objects as well as their bodies. The instructor invited them to work in pairs, listening to the sounds produced by their partner in order to create a sound dialogue. The third phase was called “From the couple to the group”: children were invited to work in mixed groups (female and male) composed of 4-5 members. The members of each group changed from meeting to meeting. Each group, after working creatively and freely together, expressed itself in front of the rest of the class which evaluated the performance. At this stage there was a positive attitude towards the in-group and a negative attitude towards the out-group. The fourth and final phase was called “Self-Forming Groups”. In this phase children were invited to form independent groups with a maximum of 6 members. Even at this stage a positive attitude towards the in-group and a negative attitude towards the out-group were observed.

#### 3.3. Measures

The Williams Creative Thinking Test (WCTT) is a 50-item instrument assessing four levels of the Williams (1994) taxonomy for creative thinking: curiosity (i.e. inquiry), imagination (i.e. fantasizing), complexity (i.e. intricacy) and risk taking (i.e. exploration). The instrument is given to children and adolescents aged 6-16 years; each answer receives a score from -1 to 2 points. The Test of Interpersonal Relationships (TRI) developed by Bracken (1992) is aimed at evaluating the perception of children and adolescents concerning the quality of their relationships in social, familial and school contexts. The questionnaire is divided into 3 sections concerning relationships with parents, peers and teachers; each section consists of 35 items. The respondent has to choose one of four statements of the semantic differential with each answer receiving a score from 1 to 4 points.

### 4. Results

Independent samples t-test preliminary confirmed that experimental and control groups did not significantly differ on WCTT and TRI scores at pre-test (overall WCTT:  $t=.11$ ,  $p=.91$ ; overall TRI:  $t=1.14$ ,  $p=.26$ ). After the 6 month laboratory both groups were readministered the WCTT and the TRI. The participants' performance on the single factors and on the total score of the two instruments used were compared by means of a 2x2 mixed ANOVA with factors group (control or experimental) between subjects and time (pre-test or post-test) within subjects. Regarding the overall score as well as the “complexity” and “risk taking” factors of the WCTT, the main effects of group and time, and their interaction, were not significant ( $F<1$ ). Regarding the “curiosity” factor only significant main effect of time was significant ( $F=5.83$ ,  $p<.05$ ), which means that this variable increased in both groups. As for

the “imagination” factor, the main effects of group and time were not significant ( $F < 1$ , n.s.), but we found a significant interaction between the two ( $F = 8.70$ ,  $p < .005$ ), and post-hoc test demonstrated that experimental group improved more than controls. Regarding the TRI scoring, and in particular the “relationships with peers” factor, both main effects were significant (Group:  $F = 7.93$ ,  $p < .05$ ; Time:  $F = 8.95$ ,  $p < .005$ ). Moreover, there was a significant interaction ( $F = 22.58$ ,  $p < .001$ ) between the two factors, and post-hoc analysis indicated the musical group activity had more effect on the participants’ scores between the pretest and posttest. Relationships with teachers and parents did not improve after treatment; both main effects and interaction between group and time were not significant ( $F < 1$ ). Finally, regarding the overall TRI score, the interaction between group and time was significant ( $F = 9.60$ ,  $p < .005$ ), whereas the main effects were not ( $F < 1$ ). Post-hoc test demonstrated a significant gain in the experimental group.

## 5. Discussion and conclusions

This study investigated the relevance of musical activities on creativity and interpersonal relationships in a sample of 9-year-old elementary school students. The expected effects were greater on interpersonal relationships than on creativity (in this case the gain was limited to the factor ‘imagination’). To explain this result we have to remember that during the laboratory children worked in group, and this significantly improved the quality of interactions between them. The laboratory did not significantly affect the relationships with parents and teachers since the intervention took place in a classroom setting - not in a familial context - and without any participation by the teacher of the class. Given the effectiveness of the intervention, it would be useful to introduce this in schools, training courses, workshops and interventions designed to increase - beyond the specific target, e.g. musical skills - non-verbal expression and at the same time to promote cooperation and teamwork, which are essential in the developmental process. Creativity might be a “collective” achievement characterised by interpersonal relationships that lay the foundation for creative development, thanks to the exchanging of ideas and points of views. Hewitt e Allan (2013) demonstrated that opportunities to meet new people and spend time with other musicians, influence positive feedbacks from friends and peers, fostering participation to musical groups. The modified concept of “collective creativity” (e.g., Hargadon and Beckhy, 2006; Parjanen, 2012; Sawyer, 2006) is considered differently from the concept of creativity since it does not inherit all the features from its head noun (Hampton, Passanisi & Jonsson, 2011). Schools must encourage both individual and “shared” creativity together with interpersonal relations and communication in all its forms, especially among peers, as they are fundamental for the healthy development of youths. Most of the time children are often alone since both parents work, spending a lot of time watching TV and playing video games. Some of them show problematic internet use and insecure attachment dispositions (Schimmenti, Passanisi, Gervasi, Manzella, & Famà, 2013; Schimmenti, Passanisi, Pace, Manzella, Di Carlo & Caretti, 2014) and are at risk of “freezing” their collective creativity and developing maladaptive attitudes and emotions that weaken the personality and reduce the capability to face daily problems (for clinical aspects, Leanza, Passanisi, & Leanza, 2013; Passanisi, Leanza, & Leanza, 2013). Today schools are moving vertically by focusing only on the individual knowledge of the students, but it should also move transversely, promoting networks of relationships in the classroom setting, encouraging discussion and the exchanging of ideas and non verbal communication, in order to implement both creativity and interpersonal competencies, creating the basis for a divergent thinking not only at the individual level, but also in the class as a whole.

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